

REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1-8 will be pending. By this amendment, claims 1-3 have been amended; and claim 4-8 have been added. No new matter has been added.

§103 Rejection of Claim 1

In Section 9 of the Office Action, claim 1 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashi *et al.* (U.S. Patent No. 6,618,082; hereinafter referred to as “Hayashi”) in view of Kimura (U.S. Patent No. 5,301,266) and in view of Ducarouge *et al.* (U.S. Patent No. 5,617,155; hereinafter referred to as “Ducarouge”). Claim 1 has been amended.

In the Background section of the Specification, it was disclosed that “a digital still camera may record image data for one frame (one image) taken in with CCD secondary solid image pickup elements, for example, in a recording medium such as a memory card, leaving its size (the number of picture elements) as it is. However, if there is a problem in the capacity of a recording medium or there is a request to increase the number of pictures to be photographed, the image size adjusting processing, such as compression of taken image data, is executed. ... In addition, the digital still camera performs the image size adjusting processing on image data to be displayed, either in the case where there is a problem in the number of picture elements of the display screen or where images are magnified and displayed or are reduced and displayed on the monitor.” Background of the Specification, page 2, lines 22-28.

“However, in the digital still camera, when the image size adjusting processing is performed on image data to be recorded, merely thinning out picture elements of the image data

for the image size adjustment leads to problem in that image quality becomes significantly worse owing to increase of aliasing. ... In addition, in the digital still camera, it can be considered in which a high-dimensional filter is used to avoid the deterioration of image quality. However, this consideration has a problem in that the size of a hardware becomes large.

To address the above-described problem, embodiments of the present invention “provide an image device which can suitably perform image size adjusting processing on image data to be displayed and image size adjusting processing on image data to be recorded without enlarging the size of a hardware.” Specification, page 3, lines 8-13.

For example, the structure of imaging device claim 1, as presented herein, receives an input image and produces two size-adjusted output images, and includes:

“photographing means for capturing the input image and outputting the captured input image as image data;

first adjusting means for performing image size adjustment using a linear interpolation on the image data to produce a first output image that is displayed and outputted;

second adjusting means for performing image size adjustment using a curve interpolation on the image data to produce a second output image that is recorded on a recording medium;

display data output means for displaying the first output image; and

recording means for recording the second output image in said recording medium,

wherein the image size adjustment using a linear interpolation allows the first adjustment means to be simply configured to cope with changes in display operations of the display data output means, and

wherein the image size adjustment using a curve interpolation allows the second adjustment means to substantially reduce image degradation so that the second output image can be recorded with high quality.”

(emphasis added)

In summary, the imaging device of claim 1 includes, among other elements, a first adjusting means to adjust the image size using a linear interpolation on the captured image data to produce a first output image that is displayed and outputted; a second adjusting means to adjust the image size using a curve interpolation on the image data to produce a second output image that is recorded on a recording medium. The image size adjustment using a linear interpolation allows the first adjustment means to be simply configured to cope with changes in display operations of the display data output means. The image size adjustment using a curve interpolation allows the second adjustment means to substantially reduce image degradation so that the second output image can be recorded with high quality.

By contrast, the Office Action indicated that Hayashi fails to disclose performing image size adjustment while Kimura fails to teach or suggest curve interpolation. Kimura only disclose linear interpolation technique for image size adjustment and a filter to compensate for the characteristic degradation in linear interpolation process. Although Ducarouge mentions using Bezier curve interpolation to compress data, such as in vectorizing the shape of the frame, Ducarouge fails to teach or suggest all the elements of claim 1. Therefore, Hayashi, Kimura, and Ducarouge, individually or in combination, fail to teach or suggest an imaging device including a first adjusting means to adjust the image size using a linear interpolation on the captured image data to produce a first output image that is displayed and outputted; a second adjusting means to adjust the image size using a curve interpolation on the image data to produce a second output image that is recorded on a recording medium.

Based on the foregoing discussion, it is maintained that claim 1, as presented herein, should be allowable over the combination of Hayashi, Kimura, and Ducarouge.

Accordingly, it is submitted that the Examiner's rejection of claim 1 based upon 35

U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 2

In Section 10 of the Office Action, claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashi in view of Kimura and in view of Ducarouge, further in view of Matsumura (U.S. Patent No. 6,762,792). Claim 2 has been amended.

Based on the foregoing discussion regarding claim 1, and since claim 2 depends from claim 1, claim 2 should be allowable over the combination of Hayashi, Kimura, and Ducarouge. Further, the Office Action states “Matsumura disclose the using a line memory 3 for interpolation circuit 4”. Therefore, it is maintained that the combination of Hayashi, Kimura, Ducarouge, and Matsumura, individually or in combination, fail to teach or suggest all the limitations of claim 2.

Accordingly, it is submitted that the Examiner’s rejection of claim 2 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

Allowability of Claim 3

It is appreciatively noted that claim 3 would be allowable if rewritten to overcome the 112 rejection.

Newly-added Claims 4-8

Based on the foregoing discussion regarding claim 1, and since claims 4-8 depend from

claim 1, claims 4-8 should be allowable over the cited prior art references.

Conclusion

In view of the foregoing, entry of this amendment, and the allowance of this application with claims 1-8 are respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as Originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP

By:



Samuel S. Lee, Reg. No. 42,791 for

William S. Frommer

Reg. No. 25,506

(212) 588-0800